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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,738	01/16/2001	Hans Nusskern	39129-183650	7535

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EXAMINER

GARCIA, ERNESTO

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 12/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/743,738

Applicant(s)

NUSSKERN ET AL.

Examiner

Ernesto Garcia

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 October 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 31-62 is/are pending in the application.
- 4a) Of the above claim(s) 37-52 and 57-61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-36, 53-56 and 62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 37-52 and 57-61 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 7. Applicant is reminded that claims 57 and 58 are not readable on the elected Figure 25 since this figure only shows two elements 2, 3.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "10" has been used to designate both a round sleeve in Figure 26 and an oval sleeve in Figures 13, 27 and 28; reference character "2" is used to designate a constructive element with a bulge at one end (Figure 21) and a constructive element with without a bulge (Figure 25); and reference character "2" is used to designate an element having a oval shape (Figure 2), a round shape (Figure 14), and a square shape (Figure 28). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

The disclosure is objected to because of the following informalities: the comma between the numbers that determine the content by atom% should be a period; see page 4, line 35 for example. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention.

Regarding claim 35, it is unclear how the sleeve produces a holding force in the martensitic state. The publication titled "Engineering Aspects of Shape Memory Alloys" by Duering et al., discusses on page 137 in the second paragraph of section 1 that when the part is in the martensitic state by cooling the part is expanded therefore

exceeding the outside diameter of the tube or pipe to be joined. Since the part is expanded no forces are applied (see Figure 1 of the publication on page 138). This phenomena is contradictory to applicant's claim.

Claims 31-36, 53-56 and 62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 31, the limitation "nonpositive connection" in line 4 is unclear whether there is a positive connection or no connection (negative or nonpositive connection).

Regarding claim 35, the limitation "tension-induced" in line 2 is unclear. Are there types of martensitic state as compared to non-tension-induced?

Regarding claim 62, the limitation "friction-increased" in line 3 is unclear. Furthermore, the limitation ",of the constructive element" in line 3 is unclear what feature of the invention is of the constructive element. Does the applicant mean that the section is from the constructive element?

Regarding claims 32-34, 36 and 53-56, the claims depend from claim 31 and therefore are indefinite.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 31, 32, 34, 36, 53, 54, 56 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by the German patent, DE-3,007,307.

Regarding claim 31, a connecting element comprises an elastically deformable tensioning element **5**, a constructive element **1**, and another constructive element **2**. The tensioning element **5** applies a holding force, in an elastically deformed state, onto the constructive element **1**. The holding force generates a connection of the constructive element **1** with the tensioning element **5** and the another constructive element **2**. The tensioning element **5** has a length in an axial direction, and comprises a spring material consisting of a superelastic shape memory alloy (see English Abstract). The constructive element **1** is inserted in the axial direction.

Regarding claim 32, the superelastic shape memory alloy is a nickel-titanium alloy.

Regarding claim 34, applicant is reminded that the method of generating the holding force is not germane to the issue of patentability of the device itself. Therefore, this limitation has been given limited patentable weight. See MPEP ' 2113.

Regarding claim 36, the holding force is a contact pressure. Applicant is reminded that the method of generating the holding force is not germane to the issue of patentability of the device itself. Therefore, this limitation has been given limited patentable weight. See MPEP ' 2113.

Regarding claim 53, the tensioning element 5 comprises a clamping sleeve. The constructive element 1 is inserted in the axial direction. Applicant is reminded that functional "whereby" statement does not define any structure and accordingly cannot serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957).

Regarding claim 54, the clamping sleeve has a circular cross section (see English abstract).

Regarding claim 56, the clamping sleeve has one of an oval cross section and a circular cross section.

Regarding claim 62, as best understood, the constructive element 1 is inserted in the tensioning element 5. A section of the constructive element 1 is engaged with the tensioning element 5.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over German patent, DE-3,007,307, in view of the Publication entitled "TI-NI Shape Memory Alloys" by Duering et al.

Regarding claim 33, the German patent, as discussed above, fails to disclose a titanium content of the nickel-titanium alloy is between about 49.7 to 50.7 at.%. Duering et al., teaches on page 1036 that TI-NI having a titanium content of 49.7 to 50.7 at.% are commercially available. Therefore, it would have been obvious matter of design choice to select an TI-NI alloy with a titanium content of 49.7 to 50.7 at.% as pat of material choice.



Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over the German patent, DE-3,007,307.

Regarding claim 55, the German patent fails to show the clamping sleeve having an oval cross section. Applicant is reminded that a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the shape of the sleeve triangular, square, round, oval, rectangular or polyhedral.

### ***Response to Arguments***

Applicant's arguments filed 10/29/02 have been fully considered but they are not persuasive. In response to applicant's argument that the German patent, DE-3,007,307, fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a holding force in its [a] contracted state) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, applicant has admitted on record (page 10 in line 5-6 of the amendment) that the German patent teaches the sleeve contracting. The term "contracting" implies elastically deformation; therefore the sleeve is in an elastically deformed state.

***Conclusion***

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The publication "Engineering Aspects of Shape Memory Alloys" by Duering and Harrison et al. show a similar connecting element.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 3679

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 703-308-8606. The examiner can normally be reached from 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on 703-308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

  
**Lynne H. Browne**  
**Supervisory Patent Examiner**  
**Technology Center 3600**

E.G.

December 20, 2002